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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,985

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Tetsuya Ezure

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EXAMINER

TAI, XIUYU

ART UNIT

PAPER NUMBER

1759

NOTIFICATION DATE

DELIVERY MODE

10/14/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com
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Office Action Summary	Application No. 10/566,985	Applicant(s) EZURE ET AL.	
	Examiner Xiuyu Tai	Art Unit 1759	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 September 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-25 is/are pending in the application.
- 4a) Of the above claim(s) 6-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/28/2010</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1, and 3-5 have been considered but are moot in view of the new ground(s) of rejection necessitated by applicant's amendment.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nunoi et al (JP 2002-319689, cited in IDS) in view of Nakanishi (U.S. 6,222,115).

6. Regarding claim 1, Nunoi et al disclose a dye-sensitized solar cell. The solar cell is laminated within a housing (i.e. a casing, paragraph [0061]) by bonding/sticking a glass side 11 and a film side 12 (paragraph [0053], Drawing 2 and 3). The multi-layered solar cell (i.e. a stacked body) comprises:

(1) a first conductive layer 2 (i.e. a working electrode) having TiO₂ layer 3 (i.e. a porous oxide semiconductor layer) and photosensitizing pigment (i.e. a sensitizing dye, paragraph [0051], Drawing 2);

(2) a second conductive layer 7 (i.e. a counter electrode) facing the first conductive layer 1 (paragraph [0051], Drawing 2); and

(3) a carrier transport layer 9 of polymer electrolyte (i.e. an electrolyte layer) between the first and second conductive layer 2 (paragraph [0052], Drawing 2), wherein the first and second conductive layers 2/7 (i.e. upper and lower surfaces) of the multi-layered solar cell contact the glass and film sides 11/12 (Drawing 3 and 4) and the first conductive layer 2 is in contact with the glass side 12, which is a transparent rigid material having an optical characteristic of transmitting sunlight (Drawings 3 and 4, paragraph 0051]).

Nunoi does not teach an elastic member between the second conductive layer 7 and a bottom portion of the housing. However, Nakanishi discloses a photovoltaic

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module. Nakanishi teaches a photovoltaic module having (i) a stacked structure consisting of a transparent front/working electrode 2, a photoactive layer 3, and a back/counter electrode 4 (Figure 1, col. 3, line 1-4); and (ii) an encapsulate resin 6, such as EVA, is located between the counter electrode 4 and a back cover film 7 (Figure 1, col. 3, line 41-47). Nakanishi indicates that the encapsulate resin can provide high adhesive strength, thus improving the environment resistance of the solar cell (col. 2, line 5-17). Therefore, it would be obvious for one having ordinary skill in the art to include an encapsulate resin between the back/counter electrode and the back/bottom cover as suggested by Nakanishi in order to improve the environment resistance of Nunoi.

Furthermore, as is evident by the teaching of Gochermann et al (U.S. 4,540,843, col. 6, line 22-24), EVA is known as an elastic material in the art. Thus, the encapsulate resin of Nakanishi is an elastic material. Moreover, depending upon the orientation, if the working electrode/glass side of Nunoi is the front/top side, then the counter electrode/film side is the back/bottom side.

7. Regarding claim 3, the laminated solar cell of Nunoi also includes a drawing polar zone 5 to draw electricity (i.e. a second conductive body, paragraph [0051], Drawing 2 and 3) and another drawing polar zone 10 (i.e. a first conductive body, paragraph [0052], Drawing 2 and 3), wherein one end of the drawing polar zone 5 is connected to the first conductive layer 2 and the other end of the drawing polar zone 5 is extended outside the enclosure (Drawing 4 and 6, paragraph [0059]) while one end of the drawing polar zone 10 is connected to the second conductive layer 7 and the other

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end of the drawing polar zone 10 is extended outside the enclosure (Drawing 4 and 6, paragraph [0059]).

8. Regarding claim 4, the drawing polar zones 5 and 10 of Nunoi are extended outside the enclosure from the side walls of the enclosure (i.e. side portion, Drawing 4 and 6).

9. Regarding claim 5, the drawing polar zones 5 and 10 of Nunoi are extended outside the enclosure along the film side of the enclosure (i.e. a bottom portion, Drawing 4).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xiuyu Tai whose telephone number is 571-270-1855.

The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/X. T./

Examiner, Art Unit 1795

/Alexa D. Neckel/

Supervisory Patent Examiner, Art Unit 1723